



### Approaches in Health Human Resource Forecasting: A Roadmap for Improvement

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#### Abstract

**Introduction:** Forecasting the demand and supply of health manpower in an accurate manner makes appropriate planning possible. The aim of this paper was to review approaches and methods for health manpower forecasting and consequently propose the features that improve the effectiveness of this important process of health manpower planning.

**Methods:** A literature review was conducted for studies published in English from 1990-2014 using Pub Med, Science Direct, Pro Quest, and Google Scholar databases. Review articles, qualitative studies, retrospective and prospective studies describing or applying various types of forecasting approaches and methods in health manpower forecasting were included in the review. The authors designed an extraction data sheet based on study questions to collect data on studies' references, designs, and types of forecasting approaches, whether discussed or applied, with their strengths and weaknesses

**Results:** Forty studies were included in the review. As a result, two main categories of approaches (conceptual and analytical) for health manpower forecasting were identified. Each approach had several strengths and weaknesses. As a whole, most of them were faced with some challenges, such as being static and unable to capture dynamic variables in manpower forecasting and causal relationships. They also lacked the capacity to benefit from scenario making to assist policy makers in effective decision making.

**Conclusions:** An effective forecasting approach is supposed to resolve all the deficits that exist in current approaches and meet the key features found in the literature in order to develop an open system and a dynamic and comprehensive method necessary for today complex health care systems.

**Keywords:** Forecasting approach, Predict, Demand, Supply, Health human resources